

HUBUNGAN JARAK SUMUR DENGAN SUNGAI TERHADAP KANDUNGAN
BAKTERIOLOGIS AIR SUMUR GALI DI KELURAHAN PURWODINATAN,
KECAMATAN SEMARANG TENGAH, KOTA SEMARANG

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(2004 - Skripsi)

Air merupakan salah satu kebutuhan pokok yang mutlak bagi manusia dan makhluk hidup lainnya. Mengingat peran penting air dalam memenuhi kebutuhan manusia, perlu diperhatikan kualitas dan kuantitasnya dalam pemakaian air. Keberadaan bakteri *Coliform* dalam sumber air dapat dijadikan sebagai salah satu indikator adanya pencemaran air secara bakteriologis. Kandungan bakteri dalam air sumur gali dipengaruhi oleh adanya sumber pencemar di sekitar sumur, dan salah satunya adalah sungai. Tujuan penelitian ini adalah untuk mengetahui hubungan jarak sumur dengan sungai terhadap kandungan bakteri *Coliform* dalam air sumur gali. Jenis penelitian ini adalah *Explanatory Research* dengan metode survei dan desain penelitian *Cross sectional*. Jumlah populasi penelitian adalah 55 sarana sumur gali dan jumlah sampel 14 sarana sumur gali yang diambil secara *purposive sampling*. Data hasil penelitian dianalisa menggunakan uji korelasi *product moment* dan analisa regresi. Pengujian hipotesa menggunakan uji t dengan tingkat kesalahan 5%. Hasil perhitungan korelasi diperoleh nilai r sebesar -0,574 pada taraf signifikasi 0,05, dan dari perhitungan regresi didapatkan $Y=1150,82-18,125X$. Hasil pengujian hipotesa dengan uji t diperoleh nilai t hitung 2,425 dan nilai t tabel 2,178. Dengan membandingkan harga t hitung dengan t tabel dapat diketahui bahwa t hitung lebih besar dari t tabel sehingga H_0 ditolak dan H_a diterima. Hal ini berarti terdapat hubungan antara jarak sumur dengan sungai terhadap kandungan bakteri dalam air sumur gali. Dengan menggunakan perhitungan statistik, jarak minimal yang disarankan dalam pembuatan sumur di daerah penelitian adalah 60,7 meter dari sungai.

Kata Kunci: Jarak sumur dengan sungai, bakteri *Coliform*, Air sumur

*CORRELATION BETWEEN THE DISTANCE OF THE WELL FROM THE RIVER
AND THE BACTERIOLOGY CONTENTS OF THE WELL'S WATER IN
KELURAHAN PURWODINATAN, KECAMATAN SEMARANG TENGAH, KOTA
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Water is one of the primary needs of human and other creatures. Remembering water's important role, it is needed to consider the quality and quantity in water using. The existence of coliform bacteria in a water source can be an indicator of the water pollution. Bacteria content at the well's water is influenced by the pollutant source at the well's surrounding, and one of them is river. The aim of this research was to determine the relation between the distance of the well from the river and the coliform bacteria content in the well's water. The kind of the research was Explanatory Research with survey method and Cross sectional research design. The amount of the research's population was 55 wells and the sample's amount was 14 wells which was chosen by purposive sampling. The data from the research was analyzed by the correlation test product moment and regression analysis. Hypothesis test used the t test with the mistake degree 5 %. The result of the correlation test was that the r value was -0,574 at the significant level was 0,05, and the regression calculation showed that $Y=1150,82-18,125X$. Hypothesis test with t test showed that t arithmetic was 2,425 and t table was 2,178. Comparing the value of t arithmetic and t table it was known that t arithmetic had bigger value than t table, so null hypothesis was refused and alternative hypothesis was accepted. This meant that there was a relation between the distance of the well from the river and the bacteria content of the well's water. By using the statistical calculation, the minimum distance that is advised to make a well at the research area is 60,7 meters from the river.

Keyword : the distance of the well to the river, coliform bacteria, well's water